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Providing appropriate situation awareness within a mixed-initiative control s

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Abstract

The future of air combat relies on humans controlling large teams of unmanned combat air vehicles (UCAVs) within a d environment. Under the DARPA Mixed Initiative Control of Automata (MICA) program, we have been challenged to des empowers a human operator to control teams of up to thirty UCAVs. To address these challenges we are designing an that defines and provides adequate situation and automation awareness without overloading human operators to the p performance degrades gracefully. The proposed mixed initiative system is situated within a complex and highly dynan that could easily overload the multi-tasking human operators. Dozens of system parameters could be updated thousan typical mission so it is neither feasible nor prudent for human operators to maintain complete situation and automation : interaction system will provide appropriately abstracted situation awareness and notification capability that includes: g monitoring and automation awareness; task specific information requirements; and user initiated information requests. (defining adequate situation awareness as a function of mission phase, human operator role, and abstracted informatio tasked UCAV.

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